

What is claimed is:

1           1. A sprinkler to sprinkle water running in a pipeline over both its  
2 sides through sprinkler heads mounted on the pipeline, wherein:

3           the pipeline comprises first water pipes and second water pipes  
4 connected to each other alternately so as to be freely disconnectable and  
5 reconnectable;

6           both end portions of each first water pipe are formed so as to have  
7 outer diameter which is equal to the inner diameter of the second water  
8 pipes;

9           a plurality of first engaging protrusions are formed on the  
10 periphery of one end portion of each first water pipe, at regular angular  
11 intervals around the longitudinal center axis of said first water pipe; and

12           a plurality of second engaging protrusions are formed at one end  
13 of each second water pipe so as to engage with the first engaging protru-  
14 sions of the first water pipe when the end portion with first engaging pro-  
15 trusions of a first water pipe is inserted into the end with second engaging  
16 protrusions of said second water pipe.

17           2. A sprinkler as claimed in claim 1, wherein each first water pipe  
18 in the pipeline is movable along its longitudinal center axis and, when each  
19 first water pipe in the pipeline is moved toward the connection where the  
20 end portion without first engaging protrusions of said first water pipe is  
21 inserted into the end without second engaging protrusions of a second wa-  
22 ter pipe, the engagement between the first engaging protrusions of said  
23 first water pipe and the second engaging protrusions of a second water pipe  
24 at the other connection is broken.

25           3. A sprinkler to sprinkle water running in a pipeline over both its  
26 sides through sprinkler heads mounted on the pipeline, wherein:

27           the pipeline comprises first water pipes and second water pipes  
28 connected to each other alternately so as to be freely disconnectable and  
29 reconnectable;

30           both end portions of each first water pipe are formed so as to have

1 outer diameter which is equal to the inner diameter of the second water  
2 pipes;

3 at least one end portion of each first water pipe is provided with a  
4 plurality of engaging parts which are disposed in the periphery of the end  
5 portion, at regular angular intervals around the longitudinal center axis of  
6 said first water pipe and free to protrude beyond and withdraw under the  
7 level of the outer surface of the end portion; and

8 at least one end portion of each second water pipe is provided with  
9 engaging recesses in the inner surface of the end portion which engage  
10 with the engaging parts of a first water pipe.

11 4. A sprinkler as claimed in claim 3, wherein each engaging recess  
12 in the inner surface of said end portion of each second water pipe is contin-  
13 ued, in the circumferential direction of the inner surface, smoothly to the  
14 inner surface.

15 5. A sprinkler as claimed in claim 1, wherein:

16 each of the sprinkler heads of each of the first and second water  
17 pipes comprises (i) a groove-like through hole made in the wall of said wa-  
18 ter pipe, in the circumferential direction of said water pipe, at an appropri-  
19 ate place on said water pipe and (ii) a head unit to sprinkle the water in the  
20 pipeline;

21 the head unit of each sprinkler head of each of the first and second  
22 water pipes comprises (i) an outer cover which is fitted onto said water pipe  
23 to cover the groove-like through whole of said sprinkler head and slidable  
24 along the periphery of said water pipe, in the circumferential direction of  
25 said water pipe and (ii) a nozzle whose lower end is inserted in the groove-  
26 like through whole and whose upper end is fixed to the outer cover; and

27 when water is allowed to run through the pipeline, the water is  
28 sprinkled from the upper ends of the nozzles.

29 6. A sprinkler as claimed in claim 3, wherein:

30 each of the sprinkler heads of each of the first and second water  
31 pipes comprises (i) a groove-like through hole made in the wall of said wa-

1 ter pipe, in the circumferential direction of said water pipe, at an appropri-  
2 ate place on said water pipe and (ii) a head unit to sprinkle the water in the  
3 pipeline;  
4 the head unit of each sprinkler head of each of the first and second  
5 water pipes comprises (i) an outer cover which is fitted onto said water pipe  
6 to cover the groove-like through whole of said sprinkler head and slidable  
7 along the periphery of said water pipe, in the circumferential direction of  
8 said water pipe and (ii) a nozzle whose lower end is inserted in the groove-  
9 like through whole and whose upper end is fixed to the outer cover; and  
10 when water is allowed to run through the pipeline, the water is  
11 sprinkled from the upper ends of the nozzles.  
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